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THE JOURNAL OF PHILOSOPHY

SIGHTS–SEEN AS MATERIALS OF KNOWLEDGE[1]

MOST modern psychological inquiry is conducted under postulation expressible thus: Confronting various material objects are to be found certain experiencing beings, whose experiences (including their knowings) may, and for scientific purposes must, be isolated as subject-matters in behavioral inquiry.[2] Upon psychologies so constructed (as a rule in their crudest forms) practically all our sociologies are based. To such psychologies likewise the current philosophizings about science as knowledge are steadily oriented.

This manner of postulation is not always—indeed, not even commonly—explicit. For the most part it takes itself for granted as plain common sense. Where affirmed, it exhibits shadings of stress ranging upwards to a supreme self-confidence in the eternal verities. It will concern us solely as it enters scientific inquiry as guide to operation. In this form it declares with reasonable modesty, and with presumptive clarity, that investigation into behaviors is to be undertaken, and construction made, *as if in fact* the materials used consist definitely and precisely of non-organic objects, human beings (or other organisms), and experiences, with specialized isolation of the third of these for technical examination.[3]

Considered in this way with respect to their operative usefulness, such postulates have one test to face and one only: do systems constructed in their terms attain coherence of formulation and solidity of factual interpretation? Under this test the postulation is bad, because its works are bad; it has far outlived its usefulness. Some small parts of our current psychologies and sociologies are satisfactory to some workers in some small corners of the field, but

[1] This and two following papers are an expansion of remarks made at the Third Conference on Methods in Philosophy and the Sciences, New York City, May 8, 1938.

[2] For exceptions, see the next paper in this series.

[3] Let it be flatly stated now, and given maximum emphasis, that "reality" and "truth," and dogmatic concern over either, are wholly irrelevant to our present purposes. We shall consider only the status of scientific, pseudo-scientific, and expectantly scientific inquiry, with respect to what is taken to be fact, used as fact, or assumed to be on its way towards improved specification as fact in the advance of inquiry.

the general condition of both branches of inquiry is notoriously unsatisfactory with respect to consistency and to factuality alike.

Any philosopher can tell us of dozens of accusations that have been cast against the materials thus postulated, and of dozens of philosophical efforts at their reformation; but the philosopher will also admit when pressed that no philosophy has ever accomplished anything towards reform that has stayed accomplished. Something of importance has been occurring in the last generation, nevertheless, that affects the entire method of initial observation which both the philosophies and the sciences have been employing. In the present paper I shall describe and develop to some extent a transformed method of inspecting the simplest factual situations that enter behavioral inquiry. In a following paper I shall examine a number of recent psychological attitudes and constructions which tend to break away from the old forms and move towards the new ones. In a third paper I shall consider the probable frame of postulation which the newer method of construction will require.

A Key to Progress.—Some time ago Professor Woodbridge, in a renewed examination of the problem of consciousness, declared in this JOURNAL that "consciousness is seeing, hearing, and the rest," and that "seeing and hearing—and the rest appropriately—are sights seen and sounds heard"; that they "are materials of knowledge," not readily to be appraised as "functions" of anything.[4] His procedure in reaching this conclusion was to focus consideration upon "consciousness" as field of inquiry and as subject of discourse. After long-continued examination of the common-sense applications of the word and of its philosophical and scientific uses, and after a searching genetic appraisal, he achieved an immensely improved description and naming for the involved phenomena. I shall take the "is" and the first "are" in his cited words as asserting full equivalence in the naming of fact, so that when "sights seen" and "the rest appropriately" are specified, a comprehensive naming of the phenomena of consciousness has been given,[5] and no double-naming, collateral or summative, is permissible. We have here, then, a formal substitution of naming, and our procedure will be to start directly upon the basis of the substitution thus achieved. When we specify sights seen, and the rest, we shall regard ourselves as having exhaustively specified all that the word "consciousness" covers, so that nothing

[4] This JOURNAL, Vol. XXXIII (1936), p. 567.

[5] These phenomena include also "thinking about . . ." and "expressing the result . . ."; *op. cit.*, p. 563. Discussion of the status of this inclusion will not be reached directly in the present essay.

further will be implied or supplied by further use of the vocabulary of the "conscious," which may then drop out of the discussion altogether, except as it appears in occasional cases of critical offsetting.

Let us now take the words "sights" and "seen" and hyphenate them to sharpen their status as a single term which offers scientifically definite phenomena for our consideration. Let us then add an "etc." to permit ourselves to escape repetitional detail of naming when we include the correlated phenomena Professor Woodbridge has set forth, which are assimilable for *all* the purposes of the coming inquiry to the sights-seen proper. Taking these "sights-seen, etc." directly as "materials of knowledge," and proceeding to examine the forms of observation that may now be employed and the actual observations that can be made, we shall find that we have acquired an extremely efficient tool for further work.[6]

Absent entirely from our development will be any preferential imputation either to the "seeing" or to the "sights" in the term "sights-seen." In its freedom from such imputations lies one of the term's highest merits. Precisely here, however, appears a problem as to the localization of the phenomena, "sights-seen, etc.," which we may not at all evade. If the locus of these phenomena is not assigned exclusively to the organism in severance from the object (the changed status following at once if neither seen-object nor seeing-process has preferential stress), *where* are we to say that they are to be looked for and found? The answer to this question is not to be given out of hand. It is evident, however, that man's anatomical skin no longer is master in the old sense over the full scheme of observation and description. For the moment it will suffice to say that the locus may be assigned to a "situation" that includes organism and object, not as isolated beings forcing themselves or being forced into contact with one another, but as phases of one common, naturalistic process or event. Any such localization will, of course, be a provisional

[6] The following additional expressions by Professor Woodbridge are well worth consideration as illustrative of his development in this field. The citations are from essays of the dates noted, as reprinted in his volume, *Nature and Mind: Selected Essays* (1937). Consciousness . . . a type of connection (1905). Life . . . an interaction between organism and environment . . . not between consciousness and objects (1912). To expect a brain to think seems to be about as unreasonable an expectation as one can entertain (1925). Cognition is experience; only analysis of our subject-matter . . . increases our knowledge (1932). Vision . . . living and dynamic intimacy with nature; . . . Language . . . a living and natural communication with nature (1935). Seeing and hearing . . . the natural existence of sights and sounds; Knowledge . . . the elaboration of perception (1936).

device for purposes of study, a possible first approximation to spatial form, and not at all a purported determination of reality.

Sights-Seen, Etc., in Evolution.—Sights-seen, etc., enter the long array of evolutionary forms—sidereal, terrestrial, vital, and social—at the same stage at which an individualized "consciousness" is commonly averred to enter. They enter under slow gradation and differentiation just as an evolutionist might hope to make such a "consciousness" enter. They enter, however—and here lies an important difference in the outcome—as newly elaborated *process,* not as newly created (or creatively evolved) *things.* This contrast of process versus thing is not one that primarily involves the older specifications of "substance," whether material or immaterial. Rather it is a question of *force,* whether as a settled resident of a locality, or as distributed across a field with only such stress on localization as the conditions surrounding inquiry provisionally require.

An individualized "consciousness" entering the evolutionary train presents itself as a new "thing," or "quality," or "possession," or "capacity," or "power," or "force." "Emergent evolution" is friendly to it, and indeed the term "emergent" seems employed peculiarly to signalize this attitude, emphasis being placed upon the "new," not merely as produced through the processes of evolution, but more emphatically still upon this "new" as "present at" and "active at" the spot where it is thus "produced." Such an emergent "consciousness" acquires residence in or upon an organism or perhaps a brain, with all the possible consequences therefrom up to and including full theological dignity.

In sharp contrast with this, the evolving *sights-seen, etc.,* acquire no such residence. They remain process under way across a field, with their localizations having the rank only of descriptions within inquiry, to be maintained to such an extent, and only to such an extent, as proves continuingly useful.[7] They are not "things" in the defective sense of that term; they are not closely localized residents of cerebral or other narrow areas; they make no claim to the possession of independent powers of their own.

Circularity.—While sights-seen, etc., are thus established in an evolutionary setting, this setting itself is an outgrowth of knowledge, and this very "knowledge" arises directly out of the sights-

[7] The history of physics as knowledge exhibits just such transformations. Although in their book, *The Evolution of Physics* (1938), Einstein and Infeld still speak with the tongues of the "psyche," nevertheless they clearly set forth the steady advance of their own science away from the old psyche's correlate—matter—and their own very strong hope for the ultimate complete displacement of "matter" in favor of "field."

seen, etc., which provide its materials. We face the great circle of all circles. So far as we know, such a circle of knowledge is inevitable under our present conditions of living, being, and knowing. Our age has overcome the heaviest of the ancient fixations and dogmatisms, but it has not yet reached the possible future stage of calm assurance; it shows itself at its best where it attains maximum freedom for search and discovery in the manner called scientific. What here concerns us, then, is not the fact of circularity, but only the type.

Where "consciousness" enters as a quasi-thing with a definite organic location, alleged to possess and exercise a power-specialization of its own, it carries with it all the old embroilments of solipsism and realism. A "mental" which eschews its old linguistic companions and parades itself in a fresh disguise as "emergental," remains after all the same old "mental":[8] a device for practical communication, a grammarizing of fact, a crude and imperfect manner of talking, a bit of mysticism. In it the "knower" is still opposed to the "known," with little change except in the stuff out of which he is assumed to be made. The same old duplicities appear, as well in the knower when he is appraised in terms of the known, as in the known when it is appraised in terms of the knower. The old difficulties with "raw" sensation are not very far away.[9]

In contrast with all this is the situation when sights-seen, etc., are taken in direct view. The distinction of subjective and objective no longer dominates. Concreted oppositions of the type of knower and known lose their microcosmic pretenses. The processes under way cease to appear as personality-masses in particle-point construction, but instead are broken down and spread over the long course of the evolutionary series, under conditions which give inquiry greatly heightened prospects of success. Sets of descriptions may now connect with one another the full length of the evolutionary chain. Well-knit descriptions will pass from stages prior to the entry of the sights-seen, etc. (as displayed in terrestrial time), not only up *to* the sights-seen, but straight on

[8] The evidence lies in the way its proponents *make use* of it in their further procedures.

[9] E. A. Singer, Jr., twenty-five years ago or more, laid the foundations admirably for the transition from the older views, although he himself did not push the conclusion its full distance. "The beginning of our epistemological building is not a datum which might be known by itself . . . but just any point at which it occurs to us to ask ourselves, What is it you know? and, How do you know it?" . . . "Two wearily endless ways. The one leads toward, but never arrives at, the real object; the other leads toward, but never culminates in, the bare datum" (From an essay of 1910 included in *Mind as Behavior*, 1924, pp. 13–14).

through them (now in a time in which the terrestrial clock seems shrunk in significance) into descriptions of the processes called concept, word, thought, and symbol, and into those further processes called "constructions," which in the end set forth that very evolutionary background within which the sights-seen, etc., themselves are described. The "circle" is not lost, but its radius now becomes so great that along a segment of our working lives we may attain what seems to us to be direct vision forward or backward alike; this, however, solely when our "feel" is that of inquiry, and when we disregard the assertion of realities, and concern ourselves neither with *terminus a quo* nor *ad quem*. We have thus indications of an empirically established empiricism, in significant contrast with the older patterns of empiricism, rationalistically proclaimed.

Seeing Sights-Seen, Etc.—If a sight-seen is material of knowledge—if, indeed, there is any system in knowledge and observation—then we may expect the sight-seen itself to be observable. To what observation can we attain?

We start with a handicap. In current ways of talking, an observation is an organism's "act." For us, in contrast, it is the existence—the very phenomenal presence—of a sight-seen, which is not a "function" of anything. In current speech the conventions of our prescientific language, particularly its grammar, dominate report, belief, and in a well-known sense the observing itself; an illusion being no less an illusion where ancient respectability is its boast.[10] The current form of speech is a recognized obstacle to progress in the psychological and social sciences, the existing status of these sciences being evidence enough of the fact. In replacing the current form—if replacement is to come at all—we need the simplest and most efficient direct description we can obtain. The description must be verifiable, and it must be uncompelled; otherwise we do not want it at all.

Observing the situation set before us by the report "I see a tree," we have a right to take it as event, as *an* event, and to approach thus its examination. We lay aside the usual inattentive procedure of resting casually on the items "I" and "tree" under the impression that we are safe in allowing these items to explain, or serve as bases for, a possible third item, "see." The barest hint of the dubious status of the first two items should be enough to require us to seek as closely as possible the observation of the

[10] Whether grammar precedes factual scheme historically or factual scheme grammar, in such a case as the one involving "I," "see," and "tree" is a question not here at issue. We examine conditions as we find them coming before us *now*.

event, regardless of what possible re-orientation of the items "I," "see," and "tree" may follow.

The position now briefly to be sketched occupies ground common to many men of many views. The outcome depends on how far one proceeds, on where he stops, and on what he does at his chosen stopping point.[11] Our first step is to note the extreme over-generalization of the expression "I see a tree." In its place we may substitute and use for introductory purposes an expression that is much closer to the event, thus: "Standing at my window, I look out and see a tree on the hill." Even this must be made more definite in terms of "my present organism now," "this window to my left," and "that white oak beyond," and by recognizing that the "see" in question is no longer some generality of "power" or "act," but instead the indicated process of a much more definite verb than "see"—namely, "to see a," expressing precisely a present event of seeing.

In my own case the more clearly I narrow observation down to the immediate instance, the more certainly I identify the form "sight-seen" directly, without further differentiation into components such as "I," "see," or "it." I identify no component such as tree-object (apart from observable presence), no separate "idea" or mental element, or capacity, or personality factor, and no separated "act" of observing, separately performed. I observe no array of performers or performances under the conventional linguistic specifications, but instead precisely the immediately present event. Lurking in the underbrush around the edges of observation may be a myriad candidates for attention, but the behavioral techniques of their entries and exits is not our problem at this moment; once entered, they exhibit themselves in the form of sights-seen, *etc.*[12]

The illustration, "sight-seen," will suffice for the full range of "sights-seen, etc.," although if the presumptive procedure under examination were that of an independent mind-thing, with a private array of powers of its own, a single specimen—such as a

[11] A most interesting recent review is by E. B. Holt, "Materialism and the Criterion of the Psychic," *Psychological Review*, Vol. 44 (1937), p. 33. Professor Holt summons as witnesses James, Russell, Palágyi, Mauthner, Müller-Freienfels, and others, but stops at a point that enables him, according to his own desire, to reduce all process to physiological "body," and to declare positively (p. 53) that "awareness is *created* by motor response" (italics mine).

[12] No atomism or particularism is implied by the statements of the text, nor is incidentally any "infinitism." No position is taken as to how "big" or how "little" a sight-seen, or any of its company, may be, to accord with any current specification of bigness or littleness.

"seeing"—would fall far short of being adequate. In our case, consider in differentiation: (*a*) the sight-seen as an instance of observation, and (*b*) the sight-seen as an object-phase of observation, where the form in place of (tree-sight)-seen is (sight-seen)-seen. The two cases reduce to one, and although they exhibit an immense range of complexities greatly in need of exploration and organization, everywhere in them is also exhibited the characteristic process or event. Case (*b*) is an instance within the phenomena of sights-seen, etc., just as fully as was the special instance of a single sight-seen we considered above. The outlines of coherent scientific construction are clear. This is in sharp contrast with the painful problems that arise where "observation" is the "act" of an "I." The words "solipsism" and "introspection" tell enough of the story. The latter word reports certain sporadically plausible attempts to make direct contact with a linguistically engineered fiction. The former recognizes that a comparable fiction inserted into any "other" organism is beyond plausible reach of such contact. Where observation proceeds under the form of sights-seen, etc., the fiction is eliminated, and along with it the full nest of fictive problems.

Obstacles to Observation.—My observation and report, as I have above set it down may, of course, be erroneous. I can not claim validity for it unless it is also valid for other organisms like mine. The decision, however, is not a matter of statistics of attitudes at a given moment, nor of personal likings. Verifications or rejections that count come only when issues are analyzed, goals identified, obstacles overcome, and sufficient training obtained; the use of a great telescope requires all of these, and much more does our problem require them. We may mention the main obstacles that interfere, and then indicate the influence of prominently recognized objectives.

If despite all the characterization that has been given them, a reader still regards the sights-seen, etc., as "subjective" in contrast with things-objective, he illustrates a manner of obstacle, perhaps to be styled propaedeutical inelasticity, of which nothing further need here be said. In specific experience such as memory-image, however, a quasi-subjective influence may assert itself, despite high discipline of attention. One may grant, tentatively at least, a basic observation of sights-seen where tree and man confront, but feel forced to deny it when man has moved five minutes and a thousand feet down the road and memory-image comes. Hobbes in his time and in his matter-of-fact way found no difficulty here.[13] Have we such clarity of knowledge about

[13] *Leviathan*, chapters i and ii.

light-waves-at-an-instant that an event of light-waves-with-neural-continuations is in contrast a mystery?

The above difficulty under analysis shows itself to involve the particular space and time backgrounds of our ordinary reference and our connected attitude which sees events as the results of impact-causation. Our three-dimensional surveyor's space rose to unique magnificence in Newton's mechanics, but has been shorn of its older claims through the extensions of physical observation which modern physics has achieved; yet it still dominates the description of most things "psychological"; which is to say that it dominates the very region in which its standing was *never* sound, and its descriptive powers *never* adequate. Confirmed addicts of such space and time and causation bar themselves automatically from improvement of their observational processes beyond what these forms will permit.

But again these space and time backgrounds are complexly involved with our language systems.[14] Perceptional phases are entangled with "categories" and other expressive phases. Obstacle of obstacles to progress is the too highly specialized verbal device, good enough, perhaps, in its special uses, but allowed to dominate problems far beyond its proper competence. So many enterprises are under way at present towards setting the world right linguistically[15] that it is enough here to mention the situation.

Not as direct obstacle, but more widely as conditioning of opinion, we come finally to the nature of the problems men set themselves, in their respective times and places. We possess as yet no usable sociological theory of the conditions of progress, that is, of the nexus of change with change in social life. We may nevertheless very simply note that devices good for older uses, in time prove defective and must undergo replacement; and that the present age is one in which a basic "I" which "sees," and a basic "it" which "is seen," are both devices which have fallen into disrepute because of their failures to do sound work where sound work is scientifically most needed. The sights-seen, etc., appear in replacement, precisely to attempt to perform the task.

Favoring Signs.—Is there a serious student of behaviors today who asserts the existence (i.e., presence for study) of "mental

[14] Compare E. Durkheim, *The Elementary Forms of the Religious Life*, pp. 1–20, for pertinent facts, presented, however, under a widely different plan of statement.

[15] Thus Korzybski; Ogden and the shades of Bentham; Chase's troubled effort to spread the sad tale; the companions of the *Encyclopedia;* and many others. I have yet to find, however, that any of these have applied their proposed linguistic procedures to their own accepted operator-egos; till that is done I suspect all our wings will continue to flutter feebly.

states" (ideas, concepts, or whatsoever) devoid of all "content"? Probably, no. Suppose, now, an inquirer *includes* this admitted "content" fully and honestly in his behavorial materials, and then, in disregard of minor aims and games, seeks the most comprehensive construction for behavior he can get. Can he stop short of full recognition of sights-seen, etc., as basic phenomena of observation? The answer is, I think, that he can not. An accompanying incidental comment is necessary, however, to the effect that few inquirers have either occasion or desire to seek so far.

William James was our greatest observer. His "stream of thought" (with "thought" the equivalent of "consciousness") was perhaps his greatest observation. He saw, of course, with the eye of the physiologist, and located this "stream" within the skin; but even that localized setting did not suppress his feeling that by rights he should be using the impersonal verb to report "simply and with the minimum of assumption" his observation that "it thinks." "Every thought," he continued, "*tends* to be part of a personal consciousness" (italics mine).[16] In our present generation with its greatly widened knowledge of environing and social processes, James's impersonal observation "it thinks" moves readily from intra-organic localizations into the full situations of organism-object, where the form "sights-seen, etc.," becomes characteristic of it.

The strongest evidence for the phenomena, sights-seen, etc., so far as my own feeling goes, lies in the duplicity of perhaps all of those words in our language by which specific instances of "mental process" are displayed. This evidence is strong because it exhibits the utmost that speaking beings, all together across the millenia, have been able to accomplish towards isolating factually the "psyche" of their belief; and this utmost is just nothing. Long-range word-couples like "mind" and "matter," or like "subjective" and "objective," are easy enough to emit and to hold in plausible imaginative severance; but when we come down to particular instances of behavior, this is no longer possible. The philosophical ins and outs of the word "idea" in its specific applications are notorious. The word "observation," considered above, exhibits much of the same condition; it fades in and out between the observing and the observed, and is never safe until these are

[16] *The Principles of Psychology*, Vol. I, pp. 224–227. James proceeds somewhat apologetically to say that phenomena like the split personality were what led him to use the word "tends," and that "no psychology, at any rate, can question the *existence* of personal selves" (italics his), a cryptic remark one may read as one will. For a check on James's later views, see his presidential address, "The Experience of Activity," *Psychological Review*, Vol. 12 (1905), pp. 1–17, and particularly p. 9.

brought frankly into fusion, and the start is made thus. Such words as "thought," "knowledge," "meaning," "percept," "concept," all have the common affliction.[17] Even the word "operation," since the enormous increase in its use following Bridgman's brilliant application, swells with confusion; a certain recent inquiry into operational constructions employed this word in closely succeeding passages, first with the implications we call "subjective," next with those we call "objective," and finally in a way hardly otherwise to be labelled than "mixed." The more remote we place ourselves from specific facts, the more easily we proclaim the separateness of the poles of knowledge. The closer we come to specific facts, the more certainly these poles fuse into the processes of one common field.

Comment.—To adopt sights-seen, etc., as materials of knowledge brings no interference whatever with the procedures of the established sciences. Physics can select its objects for inquiry, and bring them towards precision just as it does now—indeed it will be released from some of its present incentives to paradox-hunting. Physiological psychology can carry on its researches without either present interference or any suggestion of limits to be placed upon its expansion. Only the physicist who craves to orate over God and Nature, and the physiologist or psychologist who, with similar futility, burns to instruct us of Man and Society, will fall victim; and they only as respects these particular splutterings of their linguistic energies.

No summation of physics and physiology has ever yet shown signs of yielding behavioral knowledge. In the "psychological" range of behavioral inquiries, the enterprise of most pressing importance (noted incidentally under the heading "Circularity" above) is the development of an interpretation of the processes called "concept" and "word" directly out of perceptive and subperceptive processes. The steps here to be taken are fairly plain (though if I had not already explored them to a considerable degree, I should probably not feel justified in so positive a stand as I am here taking). A very real progress had been made in this direction a generation or two ago, only to fall forfeit when an up-

[17] In a similar sense John Dewey calls "belief" a "double-barreled" word, and refuses to waste time with it in discussing the outcomes of logical procedure (*Logic, The Theory of Inquiry*, 1938, p. 7). Professor Dewey's new work is of the very highest importance in the development of interactional interpretation of behavior, but it was not available to me when these essays were prepared. To take full account of his presentation would require such extensive recasting that I have been compelled to limit myself for the present to a note appended to the final essay.

surging physiology took into its bosom most of the evil of the old "psychic," while tossing away much of the good.

From the "social" range of behavioral inquiries, an illustration—a vivid one to all students of the subject who are sufficiently interested—will suffice. This is the case of the "institution," most plainly inspected as economics has struggled to develop it. Veblen's magnificent insights and analyses were in terms of "institution," yet the best description he could give was in such phrasing as: "the institutions—that is to say the habits of thought—under the guidance of which men live";[18] and such phrasings are wholly non-informative where the "habits of thought" themselves are not technically examined and established in their operations. Commons has created an institutional economics around a definition of the institution as "Collective Action in Control of Individual Action,"[19] although such a "collective" is the purest fiction, since no behavioral processes are anywhere known except as those of individual organisms. Mitchell calls the word "institution" "merely a convenient term for the more important among the widely prevalent, highly standardized social habits";[20] in other words, he avoids characterization altogether, and this is wisdom on his part so long as the older "psychic" terms and implications are all he can muster for his uses, even though his own admirable manner of placing the "psychological" in the framework of the "institutional" runs far beyond the import of that older terminology.[21] The social sciences require specifications for their important terms such as institution—not in any miracle of precision, but at least to the extent of distinguishing fish, flesh, and fowl—as much as do the physical and physiological sciences. The construction "sights-seen, etc.," puts an entirely new face on the issue, since the materials we call physical and mental, and individual and social, now enter from the start in system—a system

[18] Thorstein Veblen, *The Theory of the Leisure Class*, p. 191. I do not recall his stressing such descriptions in his later work, but neither do I recall his making improvements upon them.

[19] John R. Commons, *Institutional Economics; Its Place in Political Economy* (1934), p. 69. Compare also the opening sentence of Chapter I. The difficulty, of course, lies only in the psychological setting of the "definition." Commons' high rank as observer of the economic scene and as interpreter of economic history is everywhere recognized.

[20] Wesley C. Mitchell, *The Backward Art of Spending Money, and Other Essays* (1937), p. 373.

[21] Walton H. Hamilton was one of the early "institutional" economists, but even in a late book of which he is co-author, *The Power to Govern* (1937), the heading for the section of the book dealing with institutional transformation is the wholly decorative one: "The Paths for the Mind."

which needs only phenomenal development, not miraculous intervention, to become workable.

By Way of Contrast.—Typical working programs with which the above suggestions are radically out of harmony may be exhibited in two well-known older formulations, and in one newer one:

Bertrand Russell: "I wish to preserve the dualism of subject and object in my terminology, because this dualism seems to me a fundamental fact concerning cognition."[22]

Sigmund Freud: "What is meant by 'conscious' we need not discuss; it is beyond all doubt."[23]

Edwin B. Holt: "When entities are combined into wholes, novel properties emerge." "A genuine analysis of the mind and the cognitive process will inevitably analyze these into things and processes which are neither mental nor cognitive."[24]

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THE DIMENSIONS OF PARTICULAR FACT[1]

PHILOSOPHY originally arose to establish general knowledge upon an absolute foundation. Its discussion has, accordingly, centered upon the relation, and the relative importance, of general and particular fact. Particular fact was invariably identified with sensible appearance. Philosophy therefore appealed to some metaphysical form, as the object of an intellectual intuition which might penetrate the veil of sensed particular fact to reach general truth.

Modern thought has intended to repudiate this metaphysical defense of general knowledge. It has conceived general knowledge to be either a discernment of uniformities immanent in sensed particular fact, or a mental reconstruction organizing particular fact into systematic knowledge. It is clear, however, that our most general concepts are not to be simply abstracted from sensed particulars, while the conception of general knowledge as an intel-

[22] *Proc. Arist. Soc.*, 1910–1911, p. 109. In a later stage Russell developed a strong interest in unification by way of "neutral stuff" (*The Analysis of Mind*, 1921); and still later he made an effort at situational treatment, declaring knowledge to need study not as "inner," but as "a manner of reacting to the environment," as "a characteristic which may be displayed in our reactions to our environment," though still referable to events occurring in heads with brains (*Philosophy*, 1927, p. 17, p. 88, p. 89, p. 285).

[23] *New Introductory Lectures on Psycho-Analysis* (1933), p. 99.

[24] *Psychological Review*, 1937, p. 36, p. 43.

[1] Being the abridgement of a paper read before the Pacific Division of the American Philosophical Association, at Berkeley, December, 1938.

lectual reconstruction endangers its status as objective description. How, asked Hume, if general knowledge is merely an abstraction from present and past particulars, can it implement prediction? How, asked Kant, if general knowledge is an organization of sensations by the mind, can it describe an independent structure? These questions have not been answered. Modern thought is a steady movement towards skepticism, a steady decline of intellectual faith. In Europe this skepticism has finally submerged science and theoretical philosophy. It moves now upon ourselves.

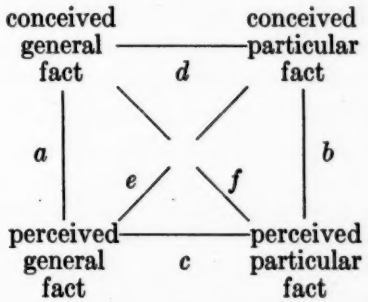
If philosophy has failed in its defense of theoretical knowledge, it has failed because of a certain false identification, which it has perpetuated even from the beginning until now. This is the identification of general fact with conceptual fact, and of particular fact with sensible fact. Today, philosophy is a controversy between logical positivism and logical realism. Their debate is the ancient one between nominalism and realism, between sophistry and rationalism. Logical positivism saves the appearance of general knowledge by arguing that general knowledge is only a conventional symbolism, prerequisite to the clear description of any particular experience. Logical realism desperately preaches the identity of general fact with certain aspects of sensible particular fact. Both parties assume the identity of general fact with conceptual fact, of particular fact with sensible fact. So they move respectively, as parties to this dispute have perforce always moved, to skepticism and dogmatism, respectively.

Why did Greek thought set up this false identification as the basis of philosophical speculation? There were several reasons, of which we will mention only one. When philosophy came to its defense of general knowledge, mathematical science had already advanced to a rather elaborate theoretical systematization of its findings. Theoretical knowledge appeared as a closed system of certain and absolute fact, imposing itself upon the particular manifestations which approximately exemplified it. The intellect or reason was set up as the infallible faculty exercising this intuition into universal fact. Modern thought intended to reject this rationalistic view, and to let sensible fact validate or correct the fallible hypotheses of thought. But it did not complete this revolution, by relinquishing that Greek fashion which, in order to raise theoretical science above reproach, separated an intellect engaging general fact from a faculty of sense perceptions engaging particular fact. Consequently it still asks: How can general concepts be induced from, and again apply to, sensed particulars? It is driven back, by this question, ever and again, to Greek skepticism and

Greek dogmatism. What is written by philosophers now might have been written in fourth century Athens.

Let us end this long confusion, if it be not too late, by rejecting the false identification of general knowledge with conceptual knowledge, of particular fact with sensible fact. If we draw a line down the realm of fact, dividing general from particular fact, then the line dividing conceptual fact from sensible fact must cross this first line at right angles. This gives us four quadrants, or four categories of fact. These are:

1. conceived general facts, e.g., Weight is a function of mass;
2. perceived general facts, e.g., These flowers are all red;
3. perceived particular facts, e.g., That man is my father;
4. conceived particular facts, e.g., Canada is part of America.



Among these four categories of fact, there must exist six types of factual relationship. Of these four categories, traditional speculation has recognized only two, those of conceived general fact and perceived particular fact. Of the six types of relationship, it has recognized only one, that which relates conceived general facts to perceived particular facts. To analyze a relation between two terms, and estimate the respective rôles of the terms in sustaining the relationship, it is essential to have knowledge of the terms in other relationships. We see that these further relations exist, since any fact of one type has relations to facts of three other types. As a consequence of its self-restriction to one type of relationship, philosophy was compelled to conceive of this relation as that of identity, allowing one term to swallow up the other. The nominalist preferred to make perceived particulars into absolutes. The realist chose to make general fact absolute and real. The two positions are equally metaphysical, in their postulation of absolute fact.

A little reflection will show that all six types of factual relationship are constantly drawn upon in the acquisition and application of natural knowledge. The distinction between conception and perception is real and important; but to confuse it with the distinc-

tion between general and particular objects of cognition is to blinker ourselves off from at least half the realm of fact, and make the procedures of science and everyday thought wholly mysterious. Philosophy has supposed that thought may proceed to general concepts from particular percepts, and thence back. But this does not describe the cognitive process, which involves all the six relations *a, b, c, d, e, f.* Consider these six relations:

(*a*) All classification proceeds from, and continually harks back to, observed similarities, or perceived general facts. The initial movement of classification is from perceived general to conceived general fact—not from particular to general fact.

(*b*) From perceived particular fact we constantly proceed to conceived particular fact—from observed particular character to particular character which is too large, too small, or too remote to be perceived. All the particular data of science, except perhaps certain data in introspective psychology, are conceived particular facts. Such fact may be macroscopic. Our city, our state, our continent, a biography, a national or other history, the evolution of organic nature or of the solar system, are examples of conceived particular fact.

(*c*) Within an observed situation we distinguish both particular and general fact—for example, we perceive the peas in a pod. Each pea is a particular; but our perception grasps a plurality of like particulars, distinguished from their context because they exemplify a common character immediately apprehended. To appreciate perceived general fact is to recognize the intimate and reciprocal relationship between general and particular character. The peas are identified as individuals or particulars just in virtue of their repetition of a general character. A particular fact is always the exemplification of a general fact. Our initial apprehension of particular fact involves a coeval apprehension of general fact. We shall find that this intimate relation persists in our conceptual knowledge of fact.

(*d*) All conceived fact has its sources in perceived fact; but scientific thought moves for the most part in a realm of conceptions, only touching the solid ground of perceptual fact at intervals. The general concepts of science are reached in two ways. Perceived similarities are further compared by the aid of memory, imagination, symbolization, and other means, to lead to more abstract generalizations. But also, perceived particular facts are somehow synthesized into large conceived particulars; and just as within the perceived particular we may note similarities of form, so within the large conceived particular we may distinguish and abstract certain constant or recurrent general forms. For example,

the discovery of the planetary orbits occurred as an abstraction of the general orbital motions from a reconstructed celestial history—a conceived particular fact. Social theory is more obviously based upon general characters noted and abstracted from some reconstructed social history. The generalizations in such cases are no more trustworthy than the reconstructed histories from which they are abstracted. Similarly, all prediction involves the apprehension, in some particular progress leading up to the present, of certain constant and recurrent aspects which may, since they have characterized the past and we know of no conditions preventing their continuance, be ascribed to the future. What is predicted is the continuance of these general characters; and there is no psychological nor logical reason which might invalidate prediction generally. We do not assume that nature is uniform, nor that the future must resemble the past; but we refuse to disbelieve what evidence we have, and say that constants and general facts are not what they appear to be. There is no *a priori* reason to ascribe to nature either absolute permanence or absolute change. There can be no philosophical doubt of prediction, nor can there be philosophical justification of prediction. The doubt and the justification are necessarily of an empirical nature, concerned with whether we have properly reconstructed the large particular fact, or history, within which the constants depended upon have been noted.

(*e*) As we walk through a forest, we observe similarities of leaf, trunk, undergrowth, etc. Our conception of the forest as a particular unit is determined by such perceived generalities. A very striking illustration of this relationship is the dependence, in exact science, of our conception of the particular experimental process upon the observation, which may be almost unconscious, of the regular gradation and the rectilinear or other uniformity of the measuring scale. We do not, as some have asserted, observe merely the coincidences of terminal points in measurement. We observe that the ruler parallels the object measured, that the needle or mercury moves through successive gradations. All of these observations apprehend perceived general fact, which remains an integral part of research.

(*f*) The relation between general conceptions and perceived particulars is that which epistemology has always emphasized. It is important because the discrepancy between perceived particular fact and what we anticipated is the clear intimation of some inadequacy in our thought. The absence of the anticipated particular shows either that the general form which it would have exemplified does not exist, or that the reconstruction of particular fact determining our expectation was faulty. For example, our

failure to bet on the winning horse demonstrates either our false estimate of the constants involved in the race—the respective powers of the horses and jockeys—or our ignorance of the particular history leading up to and continued in the race. The relation between general concept and perceived particular would seem to be the important verifying relation. It is, perhaps, the least important of the six relations in the acquisition of large knowledge, which would seem to proceed from perceived particular-general complexes to conceived particulars, the movement to general concepts proceeding by abstraction from these latter.

The foregoing is presented only to illustrate the gratuitous character of the philosophical problems of induction and prediction, and not as an adequate analysis of the cognitive process. But even so brief and cursory an appreciation as this, of the indifference of thought and perception to the particular or general character of fact, may serve to correct certain deep-seated philosophical fallacies. The most pernicious of these is our presupposition that particular fact is small transient fact. This prevents us not indeed from apprehending large particular fact, but from assessing such fact at its proper importance, and from appreciating its place in scientific research. When Copernicus revived the heliocentric hypothesis of planetary motion, what roused Europe from its dogmatic slumber was a Copernican history, not primarily a Copernican generalization or theory. What Copernicus did, that is to say, was to reconstruct a period of celestial history, within which the astronomical data were organized upon the basis of a heliocentric in place of a geocentric hypothesis. The heliocentric hypothesis appears on the one hand as a principle of organization of particular observations, on the other hand as an abstraction from the organized evidence; but in neither rôle is it a generalization from sensed particulars, reached by simple comparison.

While science is everywhere an advance from perceived general and particular fact to conceived general and particular fact, its method differs in different fields. This difference is conditioned partly by the nature of the material, and partly in deference to subjective interests and prepossessions; but it can be understood in terms of the six types of factual relationship which we have distinguished, some of these relations being stressed at the expense of others. Our aim should be to overcome this material recalcitrance and subjective prejudice; for in truth the four categories of fact, and the six relationships among them, must be everywhere of the same relevance and importance. Physical science has stressed the verifying relation (f), relating conceived general fact to perceived particular fact. Its movement accordingly has been towards very

wide but abstract concepts, verified in particulars increasingly microscopic. Its goal would seem to be a universe of dust, each microscopic entity exemplifying universal form. This is the consequence of its neglect of the categories of perceived general fact and conceived particular fact, and of five types of relationship among facts. Philosophy, which should have corrected this bias, existed to justify it. Geology, however, now stresses just those facts and relations which physical science has neglected. It proceeds from the perception of similarities in physical nature to a reconstruction of geological history. It stresses the relations *a*, *e*, and *d* in our diagram. Where physical theory supposes its general concepts to be of universal scope, geology confines its generalizations to the large particular evolutions from which they have been abstracted.

We can see, too, why physical science is thus biased. Originating in geometry and advanced by experimental technology, it has always been possessed of a body of general formulae acquired independently of any observation of natural processes. An occasional exemplification of this experimental theory in particular natural occurrence has been accepted as proof of its descriptive cogency.

The study of organic nature which culminated in Linnaeus had stressed relation *a*, between perceived general fact and conceived general fact. Its issue was a classification of species. Since causation relates particulars, this Linnaean science neglected causal connection. At one stroke, however, Darwin supplemented this one-sided science by his insight into the historical evolution of organic form. The hierarchy of specific and generic form becomes a summary of and an abstraction from this enormous particular fact of organic evolution, as well as an auxiliary in its reconstruction. Contemporary biology presumably constitutes the exemplary model of an empirical science, equally intent upon all four categories of apprehensible fact.

Finally, the social sciences, until a century ago, emphasized the relation *b*, connecting perceived and conceived particular fact. It moved from particular records to histories, with a minimum of attention to general fact. This bias is corrected by the rise of sociology; and while there is much confusion as to the relation of social theory and social history, we may expect an increasing mastery of the four categories of social fact and their relationship.

Our analysis serves also to cast light on the meaning of causal relationship, and to warrant our faith in the adequacy of causal analysis. Causation is a complex relation, involving in its discernment all four categories of fact. The causal relation itself, it is

true, exists only among particulars. It is our appreciation of the relatively unitary and relatively independent character of some large historical or spatio-temporal particular, the earlier and later phases of which present an intelligible continuity. This continuity, or unitary and articulate form generated in time, is perceptible in a wave or a stone's flight. It is only where the continuous history has to be reconstructed by thought that we speak of causal sequence. To build up this history, we proceed from perceived particulars to the large conceived particular; but to know what particulars belong to the larger history we appeal to some general character investing those particulars. This general character might be perceptible, e.g., in the color by which certain surfaces are recognized as belonging to a single current of water; or they may be only conceivable, as in the recent study of a submarine current off the California coast. The causal relation appears where we recognize continuous particulars as related to each other in virtue of their inclusion in some larger conceived particular, or unitary history. It is the dramatic connection of fact, illustrated in any drama where the sequence of acts of the characters advances a unitary complex action. Philosophy has failed to understand causation because it has stopped short, in its study of causal connection, of the large particular history bearing the general characters. Either it has appealed to the universe as the ground of causal connection; or it has required that the causal connection between small particulars should be explained in terms of some general fact or law, that is, in terms of their resemblance to each other. It is only the inclusive but still particular history, we see, that bears the continuity which is causal connection. Empirical science, emphasizing particular fact and causal connection, has its goal in large natural histories, bearing the general structures defined by its theories.

But we may have gone far enough in these suggestions of the existence, and the importance for scientific and philosophical analysis, of largely dimensioned particular fact.

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BOOK REVIEWS

L'actualité des problèmes platoniciens. LÉON BRUNSCHVICG. (Conférences du Centre Universitaire Méditerranéen de Nice, III.) (Actualités Scientifiques et Industrielles, 575.) Paris: Hermann et Cie. 1937. 21 pp. 5 fr.

The general theme of this lecture is the extent to which Plato's problems, both speculative and practical, are significant for the present day. M. Brunschvicg suggests first the persistence of Plato's mathematical and metaphysical problems in the speculations of various philosophers from Pascal to Bergson, and then the importance of his moral and political problems in the present European situation. There was, he thinks, a profound conflict in Platonism, as there is in modern culture, between a religion of aspiration, devoted to the rational pursuit of truth, and a religion of external organization in the service of social stability. The treatment of the problems is reminiscent of Bergson's *Two Sources of Morality and Religion.*

D. M.

Essai sur la deuxième hypothèse du Parménide. AZARY WEBER. (Exposés d'Histoire et Philosophie des Sciences, VIII.) (Actualités Scientifiques et Industrielles, 546.) Paris: Hermann et Cie. 1937. 35 pp. 10 fr.

The clue to the solution of the paradoxes in the earlier part of the *Parmenides* is to be sought in the Second Hypothesis in the later part of the dialogue. This Hypothesis affirms the "One-that-is" in distinction to the "One-in-itself." The "One-in-itself" designates merely the abstract unity of the Idea, as conceived by thought alone, whereas the "One-that-is" signifies a dynamic unity in the multiplicity of Becoming. In the dialectical elaboration of the Second Hypothesis, it is shown how the alleged "separation" of the One and the Many is to be overcome and the theoretical obstacles to "participation" removed. Allusion is made to similar arguments in the *Sophist* and to Aristotle's Table of Categories, but the implications are not followed out in detail.

D. M.

The Structure of Aristotelian Logic. JAMES WILKINSON MILLER. (Psyche Monographs, No. 11.) London: Kegan Paul, Trench, Trubner & Co., Ltd. 1938. (U. S. agent, Barnes and Noble, N. Y.) 97 pp. 10/6.

This book aims to present a rigorous postulational treatment of traditional deductive logic (immediate and syllogistic inference)

when negative terms are admitted into the four standard propositional forms—for the author makes clear that the rules of validity as commonly formulated are adequate only in the absence of such terms. The book contains a complete list of valid and invalid forms derived from a suitable set of postulates, a list of rules for testing the validity or invalidity of traditional deductive arguments, and finally two different interpretations of the postulates which validate the traditional relations of opposition as well as arguments with weakened conclusions. Many ingenious distinctions and definitions are introduced, and the book illustrates an interesting and useful application of postulational methods to familiar material. On the other hand, Mr. Miller has not formalized his procedure as completely as he could have. He does not distinguish carefully and consistently between using and talking about signs, nor between postulates as expressions in his system and rules of derivation as formulations of possible transformations of such expressions; as a consequence it is not clear from the explicit statements in the book whether the theorems established are (syntactical) theorems about deducibility or (non-syntactical) theorems of implication. But these flaws do not seriously impair the value and interest of Mr. Miller's book. There is one awkward misprint in the statement of postulates on page 66: Postulate 1.4 should read "sEm′ and pEm implies sEp" instead of ". . . implies mEp."

E. N.

Plato Today. R. H. S. Crossman. New York: Oxford University Press. 1939. vii + 311 pp. $2.50.

If written words will save democracy, its salvation is well under way. Mr. Crossman is "a democrat and a Socialist who sees Fascism rejected and democracy defended on quite inadequate grounds." Feeling that "our greatest danger today is not the easy acceptance but the easy rejection of Totalitarian philosophy," he has attempted to "stage the *Republic* in modern dress" against a high-lighted historical background. Plato earns the title of arch-Fascist because his philosophy "is the most savage and the most profound attack upon Liberal ideas which history can show. It denies every axiom of 'progressive' thought and challenges all its fondest ideals. Equality, freedom, self-government—all are condemned as illusions which can be held only by idealists whose sympathies are stronger than their sense." There was a time when Plato's social and political philosophizings were regarded as harmless dreams; but today "his cure for the diseases of society

is only too applicable. . . . The ideals of freedom and democracy are crumbling away. Is it not better before it is too late to replace them with the Platonic 'dictatorship of the best'?" Mr. Crossman thinks not.

Of the *Republic* he says with engaging frankness: "The more I read it, the more I hate it: and yet I cannot help returning to it time after time. For it *is* philosophy . . . the greatest book on political philosophy which I have read." It is with this mingled admiration and detestation that Mr. Crossman, himself something of a democratic philosopher-king (he is both leader of the Labour Councillors of Oxford City and a former tutor in philosophy at New College), sets about his reinterpretation of Plato for his own troubled generation. His first four chapters set the stage for his hero-villain by a vivid re-telling of the tragedy of Socrates, with the reminder that "condemning the death of the historical Socrates, each generation kills its own." The Plato who is to be confronted with the problems of the modern world is the middle-aged university president of 367 B.C., "serenely certain of the power of philosophy to rule the world," a sort of aristocratic Athenian Woodrow Wilson with both a justifiable distaste for politics and an inescapable mission of reform.

In six successive chapters, this Plato of Mr. Crossman's "looks at" British democracy, American education, the New Deal, the family, communism, and Nazism. The device permits the author to give the Fascist devil his due, and yet to reveal his conclusions as thoroughly disagreeable. About America, the author knows little except the stereotypes he has read. Russia and America, indeed, "for all their differences of political organization, are linked by the tie of a common aim . . . dominated by the acquisitive instinct . . . they put power into the hands of men who have not duly considered the ends for which power should be used." Resembling, one might ask, how many other countries in that respect? On feminism and the family, the author has his Plato make some excellent observations, although they tend to fall into the either-or form of argument. Mr. Crossman has lived for a year in Nazi Germany, but his Plato's-eye view offers little that is new or illuminating.

In a concluding chapter and epilogue, he returns to the question "Why Plato Failed" (in Syracuse), and to the flaws in his basic political program. He agrees with Plato that most men are incapable of actual self-government, and that occasionally men do arise so pre-eminent in virtue that power can safely be entrusted to them. What he denies is that the latter are to be found "only among the gentry" (refusing to take seriously the "bare possi-

bility" in *Republic* 415 that a craftsman might become a ruler); or that the supply in any given class would ever be sufficient to form a permanent ruling *élite*. Therefore "impartiality and the rule of law are possible only if sovereignty is denied to any section or group whatsoever and replaced by constitutional government." Democracy with its postulate that "all men are equal in their ignorance of the final values" is not something which can be frozen and defended; it must be dynamic, it "must always be on the attack." In a sentence: "It is Socrates, not Plato, whom we need."

H. A. L.

Consent, Freedom and Political Obligation. J. P. PLAMENATZ. (Oxford Classical and Philosophical Monographs.) New York: Oxford University Press. London: Humphrey Milford. 1938. xi + 163 pp. $2.50.

To publish another book on the political ideas of T. H. Green and Bosanquet at Oxford seems like carrying coals to Newcastle; in reality, however, it is carrying Cambridge "analysis" to Oxford idealism. The author subjects the ideas of the general will, the common good, and freedom to a meticulous analysis in order to discover what solid ground they give for the theory of political rights, consent, and obedience. Bosanquet and Hegel fare worst as a result of this analysis, for their attempt to prove that a citizen should consent to his government because it is doing his "real will" is shown to rest on a tissue of confusions. Green's doctrine of the common good is true, or rather a truism, if it means merely that the greatest good of the greatest number is the common end of men; but Green "failed to distinguish a common end which is a private good from a common good" (p. 81).

The more constructive part of the argument is the attempt to arrive at a theory of rights to take the place of the confusions in the doctrine of natural rights, some of which confusions Green himself pointed out and others of which he perpetuated. According to Plamenatz, and here the influence of G. E. Moore is patent, rights do not rest on their recognition but on their actual utility for promoting the good. He then proceeds to defend "the power to act freely" (i.e., to act from "a desired motive") as such a right. Having proved "logically" that every man has a right to freedom, the author then discovers that in a world where social cooperation is necessary no man can actually enjoy this right. Similarly he admits that "the necessary conditions of a man's exercising his rights are not the same as the conditions of his possessing them" (p. 94).

A more empirically-minded philosopher might be dismayed at arriving at the conclusion that what should be can not be. But Plamenatz is not worried by this situation. He smuggles empirical elements into his argument when he needs them and he even condescends to a whole Appendix of empirical criticism of democracy, but he has an "analytical" disdain for such procedure and, indeed, employs it most uncritically. For example, at a crucial juncture in his "analysis" of the common good, he states quite dogmatically, apparently without "logical" scruples, that "most, if not all, of the things which we call good are, as a matter of fact, states of somebody or other's mind" (p. 72). At another juncture he says "there are no qualitative differences between desires (except differences in the degrees of their intensity) of which we are normally aware" (p. 110). Many other instances could be mentioned of empirical generalizations, inadequately substantiated, which play an important part in what purports to be a "logical" analysis of terms.

However, within its conscious limitations, this critique of current political ideas is uncommonly searching and dispassionate. Especially good and constructive are his analyses of the meanings of "natural" rights and of consent in relation to representation.

H. W. S.

A Theory of Value. JOHN R. REID. New York: Charles Scribner's Sons. 1938. ix + 304 pp. $2.00.

The author has attempted "to analyze and clarify, in a systematic way, certain fundamental concepts—such as definition [his incessant and laudable preoccupation throughout], judgment, and standard—which are . . . logically basic for clear understanding, as well as intelligent practice, in the fields of esthetics and morals." He has tried "to bring together theory and fact, to examine the basic concepts of value theory in the light of relevant experimental and clinical facts taken from psychology, physiology and psychiatry." His theory of value "may be called empirical or naturalistic in that it looks to science and common sense for its facts and to human feelings and preferences for its ideals" (pp. v–viii). This naturalistic thesis ("many men, many manners, many morals," p. 161) is defended with consistency and considerable ingenuity. The only philosophers quoted with genuine approval are Hume, Spinoza, and Santayana. The doctrines of the idealists are dismissed with supercilious contempt, while those of realists like Moore and Laird are attacked, too frequently at the *ad hominem* level, with a heat which suggests a guilty philo-

sophical conscience. The book contains some valuable analysis and marshals some empirical data which throw light on certain conditions of evaluation. But it is marred throughout by the author's determination to be clever, witty (if puns can be so construed), and sophisticated at all costs, and by a failure to achieve an imaginative and sympathetic understanding of normative experiences and interpretations other than his own. Contemporary naturalism deserves a more judicious and dignified defense, more reminiscent of the Spinozistic temper.

T. M. G.

A General Schema for Natural Systems. (Nature Considered as a Function of Types of Selectivity and of Modes of Selection.) IRWIN BISER. Philadelphia: Westbrook Publishing Co. 1938. 155 pp.

This book (a dissertation for the doctorate at the University of Pennsylvania) outlines the main features of what the author calls "experimental rationalism," and reworks in a very interesting way and in the context of modern scientific ideas and procedures some of the leading ideas of Kant and Spinoza. The central theme of the book is perhaps expressed in the thesis that knowledge is selective in character, that all assertions about facts of experience have for their background a conceptual framework of laws which we "impose" upon an "amorphous" sensuous content, and that all conceptual frameworks require a reference to sensuous fact. Dr. Biser does not subscribe to any fixed *a priori* principles other than the principles just enunciated; and he takes great pains to make clear that the specific conceptual patterns we employ are variable, that they must be subjected to the test of empirical verification, and that science is a developing system aiming at the (unattainable) ideal of a closed, fully coördinated, and unique pattern of functional relations into which all constituents of experience would enter. He insists that the cardinal tenet of experimental rationalism is concrete analysis, and himself illustrates many of his points with interesting examples from modern physical theory; and he has many sound observations on such matters as our knowledge of other minds, the meaning of "energy" in physics, and the rôle of invariants for attaining "objectivity."

Dr. Biser presents his position in the form of a series of numbered postulates and theorems. This mode of exposition seems to me ill-advised, and the "rigor" thus introduced is only a specious one. The "theorems" frequently have the form of aphorisms, their meaning is by no means always clear, and they can be said to

follow from the postulates only by courtesy. One does not quite know what to make of such pronouncements as that each symbol must have a referent in the conceptuo-sensuous manifold or that a logical pattern when tested for consistency must have a phenomenal reference; and I have found the discussion of ontology very obscure indeed. It is a pity that with so many interesting ideas and so much information at his disposal, Dr. Biser has not done greater justice to them or to himself. But perhaps, having now assembled a good set of notes for an interesting book, he will proceed to write it.

E. N.

OTHER NEW BOOKS AND JOURNALS

Lapchine, J.: A Spir, sa vie sa doctrine. (Bulletin de l'Association Russe pour les Recherches Scientifiques à Prague, Vol. VII, No. 42.) Prague: Université Libre Russe. 1938. pp. 77–116. 50c.

Lossky, N. O.: Mystical Intuition. (Bulletin de l'Association Russe pour les Recherches Scientifiques à Prague, Vol. VII, No. 45.) Prague: Université Libre Russe. 1938. pp. 179–220. 50c.

Kettner, Frederick: The Synthesis of Science and Religion. (Biosophical Series, Number IV.) New York: Biosophical Institute. 1939. 22 pp. 10c.

Das, Bhagavan: The Science of the Self, or The Principles of Vedanta-Yoga. Benares: Indian Book Shop. 1938. xvi + 273 pp.

Chandler, Albert R., and Barnhart, Edward N.: A. Bibliography of Psychological and Experimental Aesthetics. 1864–1937. Berkeley: University of California Press. 1938. 190 pp. (mimeographed).

PHILOSOPHICAL REVIEW. Vol. XLVIII, 2. Three Windows into Reality: *R. T. Flewelling.* History as the Struggle for Social Values: *J. A. Leighton.* Logic and Social Studies: *G. H. Sabine.* Proceedings of the American Philosophical Association. Discussion—Diocles of Carystus: *D. W. Thompson.*

JOURNAL OF SYMBOLIC LOGIC. Volume 4, Number 1. On the reduction of the decision problem. First paper. Ackermann prefix, a single binary predicate: *László Kalmár.* Note on a recent set of postulates for the calculus of propositions: *E. V. Huntington.* On the consistency of Quine's *New foundations for mathematical logic: Barkley Rosser.*

REVUE INTERNATIONALE DE PHILOSOPHIE. Première Année, 2. (Fascicule consacré à Husserl.) Die Frage nach dem Ursprung der Geometrie als intentional-historisches Problem: *Edmund Hus-*

serl. Das Problem der Phänomenologie Edmund Husserls: *Eugen Fink.* La Phénoménologie de Husserl: *Max Dessoir.* Husserls Phänomenologie und die Motive zu ihrer Umbildung: *Ludwig Landgrebe.* Husserl et l'idée de la philosophie: *P. L. Landsberg.* La fenomenologia e il compito del pensiero contemporaneo: *Antonio Banfi.* Husserl et Hume: *Gaston Berger.* Phénomenologie et linguistique: *H. J. Pos.* La phénoménologie d'Edmund Husserl il y a trente ans: *Jean Héring.* Husserl, Bibliographie: *Jan Patocka.*

BLÄTTER FÜR DEUTSCHE PHILOSOPHIE. 12. Band, Heft 4. Die Aporien des Zeno und die Einheit des Raumes: *W. Cramer.* Antinomien und Paradoxien in der Logik: *Walter Bröker.* Die gläubige Freiheit deutscher Menschen: *Hermann Schwarz.* Der Mythos bei Schelling: *Erich Ruprecht.*

ARCHIVES DE PHILOSOPHIE. Volume XIV, Cahier III. Études Critiques: I. Métaphysique: Systèmes et questions. (i) Traités généraux. (ii) Le principe d'individuation. (iii) La nature métaphysique de la personnalité. (iv) Autour de la liberté. *P. Descoqs.* II. Philosophie religieuse. Bulletin de philosophie chrétienne. Notions préliminaires. (i) Autour de saint Augustin. (ii) Du nouveau dans l'interprétation d'Avicenne. (iii) Saint Thomas; thèses thomistes. (iv) Duns Scot, Henri de Gand, Roger Bacon. (v) Apologétique. *B. Romeyer.* III. Morale et politique. Le problème politique: *G. Jarlot.* IV. Philosophie scientifique. (i) Histoire de la pensée scientifique. (ii) Épistémologie scientifique. (iii) Science et métaphysique.: *J. Abelé.*

REVUE DE PHILOSOPHIE. 38e Année, No. 6. La théorie aristotelicienne du lieu: *A. Sesmat.* La question platonicienne: *M. de Corte.* Instinct animal et intelligence humaine: *A. Stocker.*

POLSKI PRZEGLAD TOMISTYCZNY. Rocznik I, 1939. (We have received the first number of a Polish quarterly devoted to Thomist philosophy and theology. The editors are I. M. Bocheński and A. Gmurowski, and the review is published by Wydawnictwa oo. Dominikanów, pl. Dominikański 2, Lwów, Poland. Subscription, 12 zł.)

NOTES AND NEWS

We regret to learn of the death of Lucien Levy-Bruhl, professor at the Sorbonne, in Paris, on March 13, at the age of 82.